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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,764	11/25/2003	Stephane Bedard	14206/67101-B	4189

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EXAMINER
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WILLSE, DAVID H

ART UNIT	PAPER NUMBER
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3738

DATE MAILED: 06/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/721,764	<b>Applicant(s)</b> BEDARD ET AL.	
	<b>Examiner</b> Dave Willse	<b>Art Unit</b> 3738	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 4, 12, 13, 22 and 26-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-11, 14-21 and 23-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>4-23-04</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

Claims 4, 12, 13, 22, and 26-34 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on April 17, 2006.

The disclosure is objected to because of the following informalities: On page 2, line 10, "silicon" should be replaced by --silicone--; on line 24, "on" should read --an--. On page 4, line 3, the comma should be deleted. On page 12, line 8 (and on page 14, lines 22-23), the "incremental optical encoder (260)" is not indicated in the drawings. On page 16, line 21, "may be", second occurrence, should be deleted. On page 17, line 2, the period should be omitted. In claim 1, line 5, the comma should be deleted; on line 7, "on" should be replaced by --an-- or --one--. In claim 8, line 1, "boards" should apparently be replaced by --board--. Appropriate correction is required.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s) (*In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969)).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-3, 5-11, 14-21, and 23-25 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-25 of copending Application No. 10/463,495. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present limitations are set forth in the copending claims or would have been obvious from the copending claim elements. For example, the limitations of present claim 1 are found in claims 1 and 2 of the copending application. Regarding claim 6, a detachable closure would have been obvious in order to facilitate maintenance or adjustment or replacement of the actuator (copending claims 3 and 6). Regarding claim 21, the motor being located adjacent to the knee member (copending claim 23) would have been obvious from the follower engagement being located at the *bottom* end of the linear actuator (copending claim 24). Regarding claims 23-25, the particular sensors were common in the art at the time of the present invention and would have been obvious from the further limitations of copending claims 11 and 13 and from the purpose of actuating and controlling an above-knee prosthesis. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 25 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 25, line 1, "said sensors" (plural) lacks a proper antecedent basis.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3, 9, 10, 14-18, 23, and 24 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Flowers et al., *Journal of Biomechanical Engineering*: Transactions of the ASME: February 1977, pages 3-8. Regarding claim 1 and others, Figures 3 and 5 illustrate a primary joint member and pivot assembly in the form of a knee joint, a socket and socket connector assembly, an elongated structural member or shank, a prosthetic foot and foot connector assembly, and a linear hydraulic actuator. Regarding claim 2, the locations at which the torque coupler cables (page 4, first column, lines 39-43) are attached to the knee member (Figure 5) inherently define pivot axes because of the flexibility of said cables. The further limitation of claim 3 is illustrated in Figures 3 and 4.

Claims 5-8, 11, 19-21, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flowers et al., *Journal of Biomechanical Engineering*: Transactions of the ASME: February 1977, pages 3-8. Regarding claim 5, a hollow shell would have been obvious to the ordinary practitioner in order to improve the structural support of the device and/or to mount or house electrical wiring, sensors, etc. Regarding claims 6 and 11, a detachable closure portion of the shell would have been obvious in order to facilitate assembly, disassembly, maintenance, and/or adjustments of the mechanical and electrical components of the system. Regarding claims 7, 8, and others, the shell supporting the signal processing and controller modules (Figure 1) would have been an obvious upgrade of 1970s technology in view of the miniaturized, affordable, lightweight nature of modern electronic circuitry, power supplies, and so on, in order to eliminate the unwieldy nature of the electrical cables as depicted in Figure 1. Regarding claims 19 and 20, a rotary member with linear displacement would likewise have been an obvious upgrade, because "small, lightweight actuators" (page 4, first column, lines 7-8) in the form of portable electric motors with sufficient torque were, at the time of the instant invention, readily available to one of ordinary skill and would have been obvious in order to eliminate the hydraulic power supply and tubing, and electric motors can be configured to absorb as well as deliver power (page 4, first column, lines 8-9). Regarding claim 21, the motor being located adjacent to the knee joint member would have been obvious because the frame members of the shank widen out (and hence offer more space) towards the knee joint. Regarding claim 25, optical sensors were well known in the art at the time of the present invention and would have been obvious for the transducers that continuously provide knee position and rotational velocity

(page 5, first full sentence) in view of the reliability and accuracy of optical sensors over other types.

Claims 1, 9, 15, and 19-21 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by Ota, JP 2002-191654 A: English abstracts; Figures 1-4. Regarding claim 1, Ota illustrates a primary joint member **2** and pivot assembly **5**, a socket connector assembly **11** *capable* of connecting a socket to the primary joint member **2**, an elongated structural member or shank connected to a foot member **14** at one end, and a linear actuator **4**. Regarding claim 9, the prosthetic leg is *capable* of being used by an above knee amputee, whether or not such was the intent. Regarding claim 15, Figure 3 depicts a controller **21** and **25**.

Claims 16-18 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ota, JP 2002-191654 A. Regarding claims 16-18, feedback signals from sensors or artificial proprioceptors mounted on the linear actuator **4** would have been obvious, if not inherent, from the wiring between components **13** and **25** as shown in Figure 3 and from the stated goal of “imparting a self-walking means to a walking impaired person” (JPO English abstract: lines 5-6). Regarding claimed 23-25, load sensors and optical relative motion sensors were well known in the art and would have been obvious in order to monitor the swing and weight bearing phases along with the bending of the knee (Derwent abstract: line 6).

Claims 1, 2, 15-21, and 24 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by Artigue, EP 1 169 982 A1: English translation and drawings. Regarding claim 1 and others, reference is made to Figure 1. Regarding claims 15 and 16: page 5, paragraphs 0009 and 0010. Regarding claim 17: Figure 5; paragraph 0036 (pages 13-14). Regarding claim 18: page 15, lines 9-12.

Claims 3, 5-9, 11, 14, 23, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Artigue, EP 1 169 982 A1. Regarding claims 3 and 5, the structural member including a cosmesis would have been obvious for aesthetic purposes and in order to protect the components from the environment (and *vice versa*). Regarding claim 6, the cosmesis having a detachable closure would have been obvious in order to provide access to the components for maintenance, adjustments, and the like. Regarding claim 9, although the document specifies arm prostheses, adapting the device for lower limb prostheses would have been obvious to the ordinary practitioner in order to accommodate above knee amputees desiring myoelectric control of knee joint function. Regarding claims 23 and 25, load sensors and optical sensors would have been obvious for reasons similar to those presented above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dave Willse whose telephone number is 571-272-4762 and who is normally available Monday through Thursday and sometimes on Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Corrine McDermott, can be reached on 571-272-4754. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



**Dave Willse**  
**Primary Examiner**  
**Art Unit 3738**